



SEQUENCE LISTING

<110> Xiong, Yue
Ohta, Tomohiko

<120> Isolation of ROC1 and ROC2

<130> Xiong and Ohta

<160> 41

<170> PatentIn Ver. 2.1

<210> 1

<211> 327

<212> DNA

<213> Homo sapiens

<221> CDS

<222> (1)..(327)

<400> 1

atg gcg gca gcg atg gat gtg gat acc cgg agc ggc acc aac agc ggc 48
Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn Ser Gly
1 5 10 15

gcg ggc aag aag cgc ttt gaa gtg aaa aag tgg aat gca gta gcc ctc 96
Ala Gly Lys Lys Arg Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu
20 25 30

tgg gcc tgg gat att gtg gtt gat aac tgt gcc atc tgc agg aac cac 144
Trp Ala Trp Asp Ile Val Val Asp Asn Cys Ala Ile Cys Arg Asn His
35 40 45

att atg gat ctt tgc ata gaa tgt caa gtt aac cag gcg tcc gct act 192
Ile Met Asp Leu Cys Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr
50 55 60

tca gaa gag tgt act gtc gca tgg gga gtc tgt aac cat gct ttt cac 240
Ser Glu Glu Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His
65 70 75 80

ttc cac tgc atc tct cgc tgg ctc aaa aca cga cag gtg tgt cca ttg 288
Phe His Cys Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu
85 90 95

gac aac aga gag tgg gaa ttc caa aag tat ggg cac tag 327
Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His
100 105

<210> 2

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2

Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn Ser Gly
1 5 10 15

Ala Gly Lys Lys Arg Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu
20 25 30

Trp Ala Trp Asp Ile Val Val Asp Asn Cys Ala Ile Cys Arg Asn His
35 40 45

Ile Met Asp Leu Cys Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr
50 55 60

Ser Glu Glu Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His
 65 70 75 80
 Phe His Cys Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu
 85 90 95
 Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His
 100 105

<210> 3
 <211> 342
 <212> DNA
 <213> Homo sapiens
 <221> CDS
 <222> (1)..(342)
 <400> 3

atg gcc gac gtg gaa gac gga gag gaa acc tgc gcc ctg gcc tct cac 48
 Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1 5 10 15
 tcc ggg agc tca ggc tca acg tcg gga ggc gac aag atg ttc tcc ctc 96
 Ser Gly Ser Ser Gly Ser Thr Ser Gly Gly Asp Lys Met Phe Ser Leu
 20 25 30
 aag aag tgg aac ccg gtg gcc atg tgg agc tgg gac gtg gag tgc gat 144
 Lys Lys Trp Asn Pro Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
 35 40 45
 acg tgc gcc atc tgc agg gtc cag gtg atg gat gcc tgt ctt aga tgt 192
 Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
 50 55 60
 caa gct gaa aac aaa caa gag gac tgt gtt gtg gtc tgg gga gaa tgt 240
 Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
 65 70 75 80
 aat cat tcc ttc cac aac tgc tgc atg tcc ctg tgg gtg aaa cag aac 288
 Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
 85 90 95
 aat cgc tgc cct ctc tgc cag cag gac tgg gtg gtc caa aga atc ggc 336
 Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
 100 105 110
 aaa tga 342
 Lys

<210> 4
 <211> 113
 <212> PRT
 <213> Homo sapiens
 <400> 4

Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1 5 10 15
 Ser Gly Ser Ser Gly Ser Thr Ser Gly Gly Asp Lys Met Phe Ser Leu
 20 25 30
 Lys Lys Trp Asn Pro Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
 35 40 45
 Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
 50 55 60

Gln	Ala	Glu	Asn	Lys	Gln	Glu	Asp	Cys	Val	Val	Val	Trp	Gly	Glu	Cys
65					70					75					80
Asn	His	Ser	Phe	His	Asn	Cys	Cys	Met	Ser	Leu	Trp	Val	Lys	Gln	Asn
			85						90					95	
Asn	Arg	Cys	Pro	Leu	Cys	Gln	Gln	Asp	Trp	Val	Val	Gln	Arg	Ile	Gly
			100					105					110		

Lys

<210> 5
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: PCR Primer
 <400> 5

tttaaagaga aataggatcc catgagcaac gaa 33

<210> 6
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: PCR Primer
 <400> 6

ttaaagtgtt acggggaatt cattttttca cct 33

<210> 7
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: PCR Primer
 <400> 7

ggcaatacag attaggatcc tatgaaagtt aaa 33

Alx
n

<210> 8
 <211> 33
 <212> DNA
 <223> Description of Artificial Sequence: PCR Primer
 <400> 8

aattgtgatt tctagaattc ttttttatcg taa 33

<210> 9
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: PCR Primer
 <400> 9

atccccatgg ctatgataac taataagaaa ata 33

<210> 10
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: PCR Primer

<400> 10
ctgcagagct cgtaggaaa ggtaattgta ata 33

<210> 11
<211> 33
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 11


atccccatgg ctatgataaa tgagagcggt tcc 33

<210> 12
<211> 33
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 12

agctcgtcga cattagtact tgtaagttgc tat 33

<210> 13
<211> 33
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 13

atccccatgg ctatgtcatt tcagattacc cca 33

 <210> 14
<211> 33
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 14

agctcgtcga catcatgagt ttttatgccc att 33

<210> 15
<211> 15
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
Peptide
<400> 15

Cys Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn
1 5 10 15

<210> 16
<211> 13
<212> PRT
<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic Peptide
<400> 16

Cys Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His
1 5 10

<210> 17
<211> 9
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic Peptide
<400> 17

Cys Arg Gln Glu Trp Lys Phe Lys Glu
1 5

<210> 18
<211> 14
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic Peptide
<400> 18

Cys Arg Ser Gln Ala Ser Ala Asp Glu Tyr Ser Tyr Val Ala
1 5 10

<210> 19
<211> 60
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 19

ttctccagtg gcagagaact ttaaagagaa atagttcaac cggatccccg ggtaattaa 60

41 ✓
<210> 20
<211> 60
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 20

acctcggat gatttaaag tttacgggca attcattttt gaattcgagc tcgtttaaac 60

<210> 21
<211> 60
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 21

atagacgtat gggcttcaat atgtgcaatg ttggttgcta gaattcgagc tcgtttaaac 60

<210> 22
<211> 60
<212> DNA
<213> Artificial Sequence

<223> Description of Artificial Sequence: PCR Primer
<400> 22

catcttcacac aacatccacac ctgtcaactt cgttgctcat gcactgagca gcgtaatctg 60

<210> 23
<211> 60
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 23

caagccaaag gcattgtttc aatctaggga tcaagagcat cggatccccg ggtaattaa 60

<210> 24
<211> 60
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR Primer
<400> 24

taaaatataa tcgttccaga aacttttttt ttctatttct gaattcgagc tcgtttaaac 60

<210> 25
<211> 6
<212> PRT
<213> Homo sapiens
<221> PEPTIDE
<222> (1)..(6)
<223> Partial Protein Sequence
<400> 25

Lys Asp Val Phe Gln Lys
1 5

<210> 26
<211> 12
<212> PRT
<213> Homo sapiens
<221> PEPTIDE
<222> (1)..(12)
<223> Partial Protein Sequence
<400> 26

Lys Ile Phe Leu Glu Asn His Val Arg His Leu His
1 5 10

<210> 27
<211> 8
<212> PRT
<213> Homo sapiens
<221> PEPTIDE
<222> (1)..(8)
<223> Partial Protein Sequence
<400> 27

Lys Asp Val Phe Glu Arg Tyr Tyr
1 5

<210> 28
 <211> 7
 <212> PRT
 <213> Homo sapiens
 <221> PEPTIDE
 <222> (1)..(7)
 <223> Partial Protein Sequence
 <400> 28

Lys Val Tyr Thr Tyr Val Ala
 1 5

<210> 29
 <211> 11
 <212> PRT
 <213> Homo sapiens
 <221> PEPTIDE
 <222> (1)..(11)
 <223> Partial Protein Sequence
 <400> 29

Lys Arg Ile Glu Ser Leu Ile Asp Arg Asp Tyr
 1 5 10

<210> 30
 <211> 82
 <212> PRT
 <213> Homo sapiens
 <221> SIMILAR
 <222> (1)..(82)
 <223> Partial Protein Sequence
 <400> 30

Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu Trp Ala Trp Asp Ile
 1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
 35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
 50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Trp
 65 70 75 80

Glu Phe

<210> 31
 <211> 82
 <212> PRT
 <213> *Drosophila melanogaster*
 <221> SIMILAR
 <222> (1)..(82)
 <223> Partial Protein Sequence
 <400> 31

Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu Trp Ala Trp Asp Ile
 1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
 35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
 50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Tyr
 65 70 75 80

Asp Phe

<210> 32

<211> 82

<212> PRT

<213> Caenorhabditis elegans

<221> SIMILAR

<222> (1)..(82)

<223> Partial Protein Sequence

<400> 32

Phe Glu Val Lys Lys Trp Ser Ala Val Ala Leu Trp Ala Trp Asp Ile
 1 5 10 15

Gln Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ala Gly Leu Lys Asp Glu Cys Thr
 35 40 45

Val Ala Trp Gly Asn Cys Asn His Ala Phe His Phe His Cys Ile Ser
 50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Trp
 65 70 75 80

Glu Phe

<210> 33

<211> 82

<212> PRT

<213> Arabidopsis thaliana

<221> SIMILAR

<222> (1)..(82)

<223> Partial Protein Sequence

<400> 33

Phe Glu Ile Lys Lys Trp Ser Ala Val Ala Leu Trp Ala Trp Asp Ile
 1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
 35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Ser Glu Trp
65 70 75 80

Glu Phe

<210> 34
<211> 82
<212> PRT
<213> Schizosaccharomyces pombe
<221> SIMILAR
<222> (1)..(82)
<223> Partial Protein Sequence
<400> 34

Phe Glu Ile Lys Lys Trp Asn Ala Val Ala Leu Trp Gln Trp Asp Ile
1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
20 25 30

Ile Glu Cys Gln Ala Asn Thr Asp Ser Ala Ala Ala Gln Glu Cys Thr
35 40 45

Val Ala Trp Gly Thr Cys Asn His Ala Phe His Phe His Cys Ile Ser
50 55 60

Arg Trp Leu Asn Thr Arg Asn Val Cys Pro Leu Asp Asn Arg Glu Trp
65 70 75 80

Glu Phe

<210> 35
<211> 82
<212> PRT
<213> Saccharomyces cerevisiae
<221> SIMILAR
<222> (1)..(82)
<223> Partial Protein Sequence
<400> 35

Phe Glu Ile Lys Lys Trp Thr Ala Val Ala Phe Trp Ser Trp Asp Ile
1 5 10 15

Ala Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Glu Pro Cys
20 25 30

Ile Glu Cys Gln Pro Lys Ala Met Thr Asp Thr Asp Asn Glu Cys Val
35 40 45

Ala Ala Trp Gly Val Cys Asn His Ala Phe His Leu His Cys Ile Asn
50 55 60

Lys Trp Ile Lys Thr Arg Asp Ala Cys Pro Leu Asp Asn Gln Pro Trp
65 70 75 80

Gln Leu

<210> 36
 <211> 79
 <212> PRT
 <213> Homo sapiens
 <221> SIMILAR
 <222> (1)..(79)
 <223> Partial Protein Sequence
 <400> 36

Phe Ser Leu Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val
 1 5 10 15
 Glu Cys Asp Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys
 20 25 30
 Leu Arg Cys Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp
 35 40 45
 Gly Glu Cys Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val
 50 55 60
 Lys Gln Asn Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val
 65 70 75

<210> 37
 <211> 78
 <212> PRT
 <213> Caenorhabditis elegans
 <221> SIMILAR
 <222> (1)..(78)
 <223> Partial Protein Sequence
 <400> 37

Phe Val Leu Lys Lys Trp Asn Ala Leu Ala Val Trp Ala Trp Asp Val
 1 5 10 15
 Glu Cys Asp Thr Cys Ala Ile Cys Arg Val His Leu Met Glu Glu Cys
 20 25 30
 Leu Arg Cys Gln Ser Glu Pro Ser Ala Glu Cys Tyr Val Val Trp Gly
 35 40 45
 Asp Cys Asn His Ser Phe His His Cys Cys Met Thr Gln Trp Ile Arg
 50 55 60
 Gln Asn Asn Arg Cys Pro Leu Cys Gln Lys Asp Trp Val Val
 65 70 75

<210> 38
 <211> 80
 <212> PRT
 <213> Homo sapiens
 <221> SIMILAR
 <222> (1)..(80)
 <223> Partial Protein Sequence
 <400> 38

Val Lys Ile Lys Cys Trp Asn Gly Val Ala Thr Trp Leu Trp Val Ala
 1 5 10 15
 Asn Asp Glu Asn Cys Gly Ile Cys Arg Met Ala Phe Asn Gly Cys Cys
 20 25 30
 Pro Asp Cys Lys Val Pro Gly Asp Asp Cys Pro Leu Val Trp Gly Gln
 35 40 45
 Cys Ser His Cys Phe His Met His Cys Ile Leu Lys Trp Leu His Ala
 50 55 60
 Gln Gln Val Gln Gln His Cys Pro Met Cys Arg Gln Glu Trp Lys Phe
 65 70 75 80

<210> 39
 <211> 80
 <212> PRT
 <213> Drosophila melanogaster
 <221> SIMILAR
 <222> (1)..(80)
 <223> Partial Protein Sequence
 <400> 39

Val Thr Ile Lys Ser Trp Thr Gly Val Ala Thr Trp Arg Trp Ile Ala
 1 5 10 15
 Asn Asp Glu Asn Cys Gly Ile Cys Arg Met Ser Phe Glu Ser Thr Cys
 20 25 30
 Pro Glu Cys Ala Leu Pro Gly Asp Asp Cys Pro Leu Val Trp Gly Val
 35 40 45
 Cys Ser His Cys Phe His Met His Cys Ile Val Lys Trp Leu Asn Leu
 50 55 60
 Gln Pro Leu Asn Lys Gln Cys Pro Met Cys Arg Gln Ser Trp Lys Phe
 65 70 75 80

AI
 <210> 40
 <211> 74
 <212> PRT
 <213> Caenorhabditis elegans
 <221> SIMILAR
 <222> (1)..(74)
 <223> Partial Protein Sequence
 <400> 40

Ile Thr Val Lys Lys Leu His Val Cys Gly Glu Trp Lys Trp Leu Asp
 1 5 10 15
 Thr Cys Gly Ile Cys Arg Met Glu Phe Glu Ser Ala Cys Asn Met Cys
 20 25 30
 Lys Phe Pro Gly Asp Asp Cys Pro Leu Val Leu Gly Ile Cys Arg His
 35 40 45
 Ala Phe His Arg His Cys Ile Asp Lys Trp Ile Gln Pro Arg Ala Gln
 50 55 60

Cys Pro Leu Cys Arg Gln Asp Trp Thr Ile
65 70

<210> 41
<211> 76
<212> PRT
<213> Saccharomyces cerevisiae
<221> SIMILAR
<222> (1)..(76)
<223> Partial Protein Sequence
<400> 41

Val Lys Ile Asn Glu Val His Ser Val Phe Ala Trp Ser Trp Asp Val
1 5 10 15

Cys Gly Ile Cys Arg Ala Ser Tyr Asn Gly Thr Cys Pro Ser Cys Lys
20 25 30

Phe Pro Gly Asp Gln Cys Pro Leu Val Ile Gly Leu Cys His His Asn
35 40 45

Phe His Asp His Cys Ile Tyr Arg Trp Leu Asp Thr Pro Thr Ser Lys
50 55 60

Gly Leu Cys Pro Met Cys Arg Gln Thr Phe Gln Leu
65 70 75